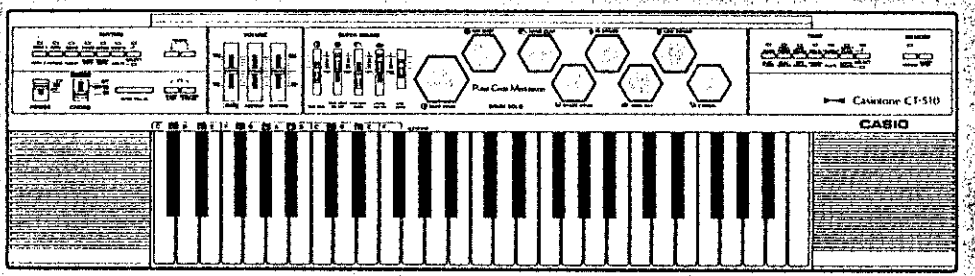
Casiotone CT-510

ELECTRONIC MUSICAL INSTRUMENT
INSTRUMENTO MUSICAL ELECTRONICO

OPERATION MANUAL 2
MANUAL DE OPERACION 26



英 西

Casiotone CT-510

ELECTRONIC MUSICAL INSTRUMENT

Introduction

Congratulations upon your selection of a Casiotone CT-510. The CT-510 is state-of-the-art musical instrument which incorporates the latest electronics technology to make its operation as easy as possible. Exceptional sound quality backed up by a host of sophisticated features and functions makes the CT-510 a joy to play for everyone.

In order to enjoy the features and functions of the CT-510 to their fullest, be sure to carefully read this manual and follow the instructions contained herein.

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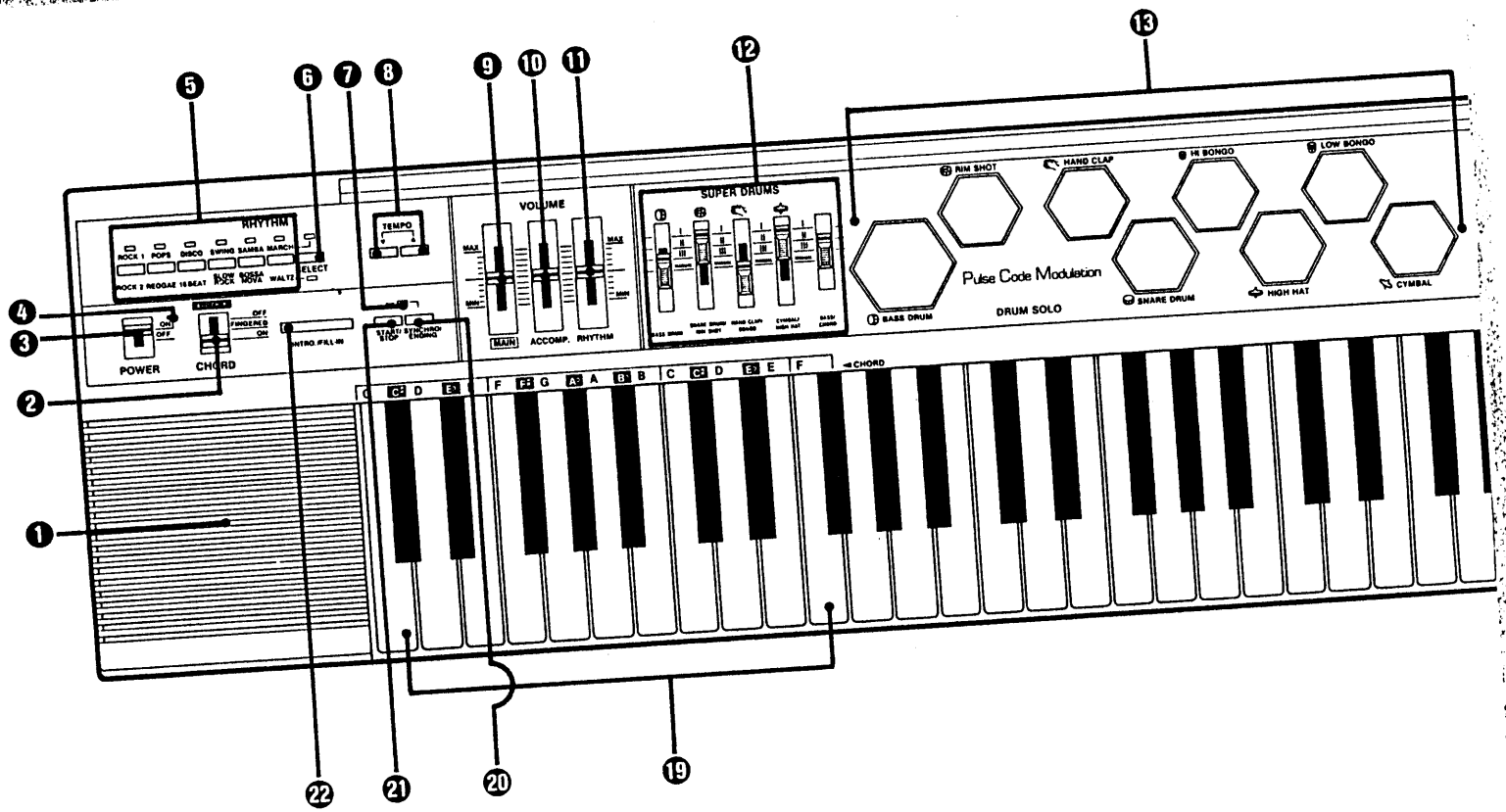
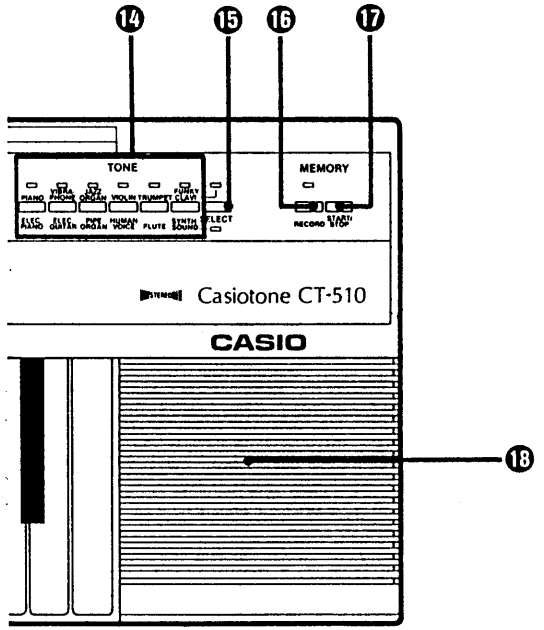
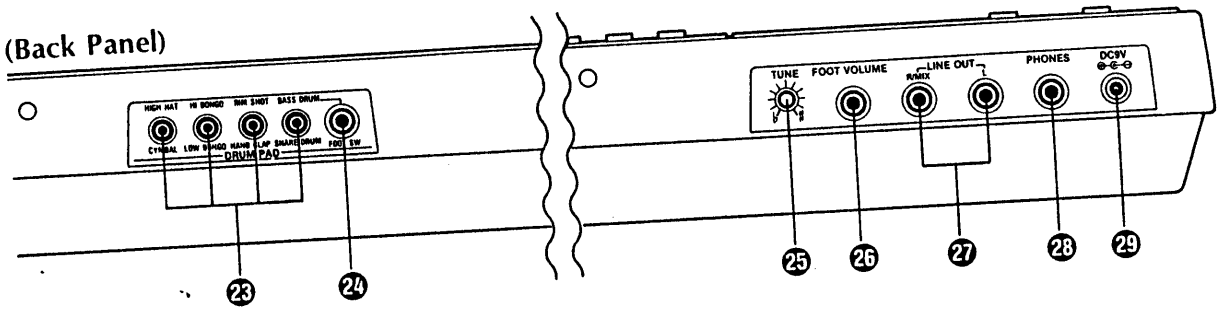
1 General Guide





❶ Built-in speaker (Left)
❷ Casio Chord switch
❸ Power switch
❹ Power indicator
❺ Rhythm selectors
❻ Select button
❼ Tempo indicator
❽ Tempo controls
❾ Main volume control
❿ Accompaniment volume control
⓫ Rhythm volume control
⓬ Super drums
⓭ Drum pads
⓮ Preset tone selectors
⓯ Select button
⓰ Record button
⓱ Memory start/stop button
⓲ Built-in speaker (Right)
⓳ Accompaniment keyboard
⓴ Synchro/ending button
㉑ Start/stop button
㉒ Intro./fill-in button

(Back Panel)



㉓ External drum pad jacks
For connection of external drum pads (DP-1).

㉔ Foot switch jack (Bass drum pedal)
For connection of foot switch (sustain pedal SP-1, optional).

㉕ Tuning control
Adjusts the pitch of the entire keyboard within ±1/4 tones (±50 cents) and provides easy tuning with other instruments.

㉖ Foot volume jack
For connection of a foot volume control pedal (VP-2, optional).

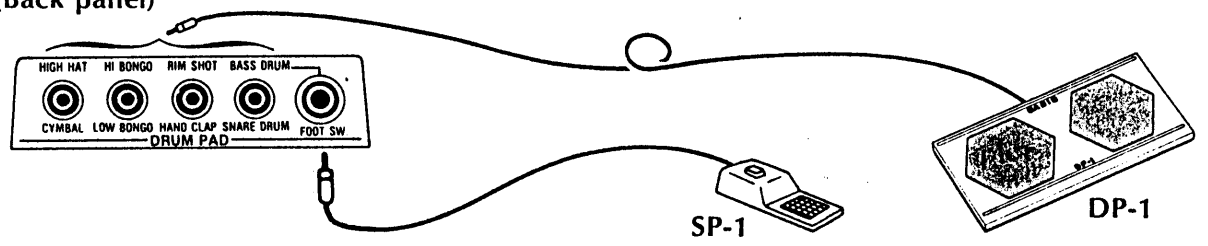
㉗ Output jacks
For connection to keyboard amplifiers, external speakers, audio equipment, etc.

㉘ Headphone jack
For connection of optional headphones (CP-2). Output from the speakers is automatically cut when headphones are connected.

㉙ AC adaptor jack
For connection of AC adaptor (AD-5, optional) or car adaptor (CA-5, optional).

Connecting External Drum Pads (DP-1)/Foot Switch (Sustain pedal SP-1)

(Back panel)



- **DP-1 (External drum pads)**
  Optional drum pads (DP-1) can be connected to the terminals on the back of the keyboard. Once connected, the right pad of the DP-1 is assigned the percussive effect noted above the terminal, while the left pad is assigned the effect noted below the terminal.
- **SP-1 (Foot switch for bass drum)**
  Bass drum may be sounded by foot when the optional sustain pedal (SP-1) is connected.

—Manual fill-in—

Striking any of the drum pads besides the bass drum pad causes rhythm accompaniment to stop for one measure, allowing manual play of a fill-in pattern.

—Drum solo—

Striking the bass drum pad causes rhythm to stop, allowing manual play of a drum solo. Rhythm resumes when the fill-in button is pressed. (Functions in the same way when foot switch is used.)

—Minus one play—
Instruments set to "MANUAL" using the super drums instrument selector do not sound during auto-accompaniment, allowing free improvisation.

2 Power Supply

This unit operates on both AC and DC power.

DC power

- **Dry batteries**

  This unit can be powered by six D size (SUM-1) manganese dry batteries. Weakened batteries will result in lower volume or poor tonal quality. The power indicator lamp will gradually lose its brightness when battery power weakens. At this time, change batteries or shift to one of the alternate power sources mentioned below.

Battery replacement:

① Open the battery compartment cover on the bottom of the unit and take out used batteries.

② Load new batteries taking care that polarity is correct.

* *It is advisable to replace all six batteries at the same time for longer battery life.*

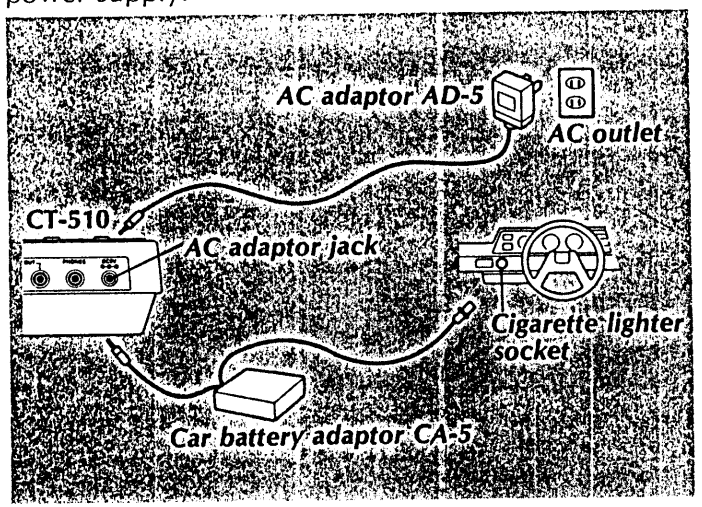
* *Refer to the specifications for standard battery life.*

- **Car battery**

  With the car battery adaptor (CA-5, optional), DC power is supplied from a car battery through the cigarette lighter socket.

AC power

An AC adaptor (AD-5, optional) is required to connect to an AC outlet. Use only an adaptor with the same voltage rating (100, 117, 220, or 240V) as the power supply in your area to prevent component damage. Plug the AC adaptor into the AC outlet and the cord into the unit. This will automatically cut off the battery power supply.



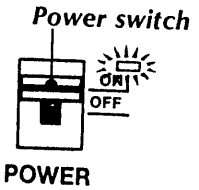
★ Auto power off function

Power is automatically cut off approximately 6 minutes after the last operation of the unit. Power supply can be restored by switching power OFF and then ON again.

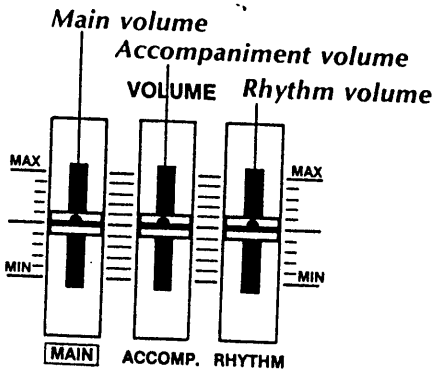
CAUTION

* Use only genuine CASIO adaptors to avoid risk of damage.
* Remove batteries from the battery compartment when the unit is not used for extended periods. (Battery leakage can damage electrical parts.)
* The adaptor may become warm when left connected to an outlet. This is normal, but the adaptor should be disconnected when not in use.
* THE FOLLOWING CONDITIONS CAN CAUSE BATTERIES TO BURST:
  1. *Use of adaptors other than genuine CASIO adaptors.*
  2. *Loading batteries with polarities reversed.*

3 General Operation

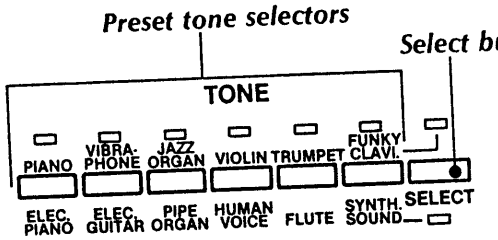


- **Power switch**
  Press to turn the power of the unit ON and OFF.



- **Volume controls**
  Accompaniment volume.....Slide to control the volume of chords, bass and arpeggio.
  Rhythm volume.....Slide to control the volume of the rhythm.
  Main volume.....Slide to control the overall volume of the output.

4 Preset Tone

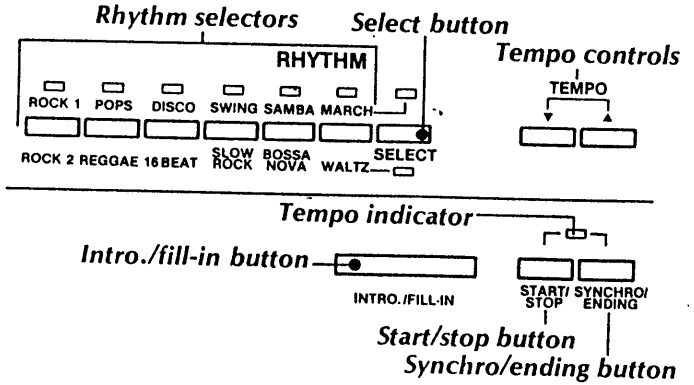


- **Selecting a preset tone**
  Use the preset tone selectors to choose a tone. Each selector is marked with two names, one above the selector and one below. The preset tone selected by each selector depends upon status (lit or unlit) of the lamps above and below the select button. An indicator will light above the selector of the tone set.

5 Auto-rhythm & Super Drums

[1] Auto-rhythm

Each of 12 auto-rhythms is capable of five different patterns for bass drum, snare drum/rim shot, hand clap/bongo, cymbal/high hat and bass/chord. This makes it possible to arrange one of a wide variety of rhythm and accompaniment patterns to suit the type of music being played.



- **Selecting an auto-rhythm**
  Use the rhythm selectors to choose a rhythm. Each selector is marked with two names, one above the selector and one below. The rhythm selected by each selector depends upon the status (lit or unlit) of the lamps above and below the select button. An indicator will light above the selector of the rhythm set.

- **Tempo control**
  Tempo or speed, at which the rhythm accompaniment is played, can be controlled using the tempo buttons. Pressing the <▲> button will increase tempo while pressing the <▼> button will decrease tempo. Tempo can be manually adjusted in any of the play modes and can be changed at any time while playing.

- **Start/stop button**
  Press to start or stop rhythm.

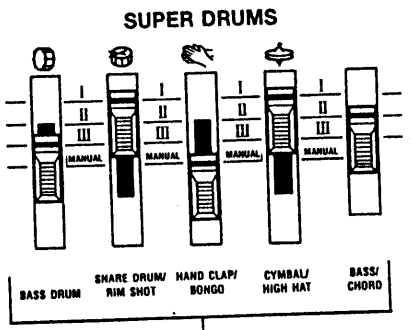
- **Synchro/ending button**
  Press to enter synchro start standby. Rhythm starts when an accompaniment keyboard key (lower 1.5 octave, C through F) is pressed. Pressing at the end of a tune inserts an ending pattern.

- **Tempo indicator**
  Blinks on the first beat of each measure during rhythm accompaniment. Stays lit in the synchro start standby status.

- **Intro./fill-in button**
  Pressing when an auto-rhythm is not being played begins rhythm play after a 2-measure intro pattern. Pressing during auto-rhythm play inserts a percussive fill-in pattern. The fill-in pattern differs according to the auto-rhythm selection.

[2] Super drums

Start any auto-rhythm and then adjust the 5 super drum controls to change the rhythm pattern to match the music you wish to play.



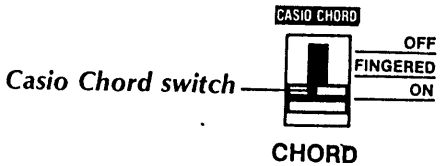
Super drums

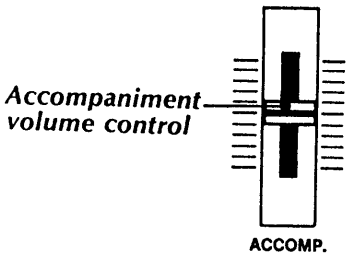
<Minus one play>
Instruments set to "MANUAL" using the instrument selector do not sound during auto-accompaniment. Play these instruments using the built-in drum pads or optional external drum pads (DP-1).

* *The chord selector is not operational if auto-accompaniment is not used (i.e. if the Casio Chord switch is set to "OFF").*
* *Selection is made automatically according to the auto-rhythm combination selected and position of the "SNARE DRUM/RIM SHOT" selector. The same is true for the "CYMBAL/HIGH HAT" and "HAND CLAP/BONGO" selectors.*

6 Auto-accompaniment

The auto-accompaniment function of this unit offers two ways of playing chords. One is the normal way in which you play three or four notes at the same time, and the other is the easier "One-finger method" which is available using the Casio Chord system.



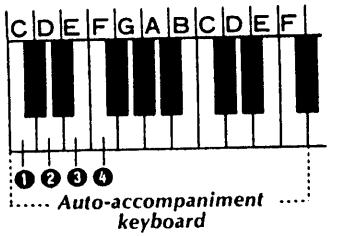


- **Casio Chord switch**
  Turns auto-accompaniment on and off.
  OFF .....For normal play without auto-accompaniment.
  FINGERED .....For auto-accompaniment pressing chords as usual.
  ON.....For auto-accompaniment using the Casio Chord system.
  **If the Casio Chord switch is set to "FINGERED" or "ON", the lower one-and-a-half octaves of the keyboard become accompaniment keyboard keys, and the upper part of the keyboard becomes 4-note polyphonic.*
- **Accompaniment volume control**
  Adjusts the volume of the auto-accompaniment, i.e., rhythm, chord and bass.

Casio Chord System

The Casio Chord system has been developed so you can play the four main types of chords more easily. Playing of the chords is simplified as shown below:

- Pressing one of the accompaniment keyboard keys produces a major chord corresponding to that note.
- Simultaneously pressing any key to the right (two keys at the same time) results in a minor chord.
- Similarly, pressing one more key to the right (three keys in all) produces a seventh chord, and pressing the fourth key to the right (four keys in all) creates a minor seventh chord.

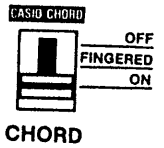


(Example)
C (C major chord)—Press ❶.
Cm (C minor chord)—Press ❶, ❷ together.
C_7 (C seventh chord)—Press ❶, ❷, ❸ together.
Cm_7 (C minor seventh chord)—Press ❶, ❷, ❸, ❹ together.

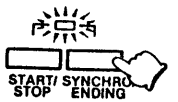
*Not only ❷, ❸ and ❹, but any black or white keys can be used as long as they are to the right of ❶.

[1] Auto-accompaniment using the Casio Chord System (One-finger Method)

①Set the Casio Chord switch to "ON".



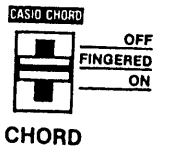
②Select one of the auto-rhythms and press the synchro/ending button.
The tempo indicator lights, meaning that the accompaniment keyboard keys are ready for play.



③Play on the accompaniment keyboard keys according to the Casio Chord system.
Adjust the tempo and accompaniment volume using the respective controls.

[2] Auto-accompaniment playing chords as usual.

①Set the Casio Chord switch to "FINGERED".



②Select one of the auto-rhythms and press the synchro/ending button.
The tempo indicator lights, meaning that the accompaniment keyboard keys are ready for play.

③Play a chord on the accompaniment keyboard keys.
Adjust the tempo and accompaniment volume using the respective controls.

7 Manual Memory

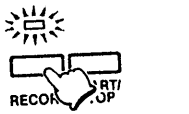
Keyboard play can be stored directly into memory. Difficult selections can be input at a slow pace and then sped up during playback using the tempo control.

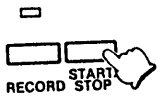
RECORDING

① Press the record button to enter the record standby mode.

② Press the memory start/stop button to start recording.
* *Recording starts after one measure of beat count.*

③ Press the memory start/stop button to stop recording.

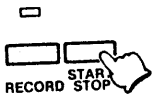


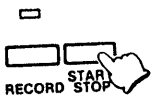


PLAYBACK

① Press the memory start/stop button to play back the stored memory.

② Press the memory start/stop button to stop playback.

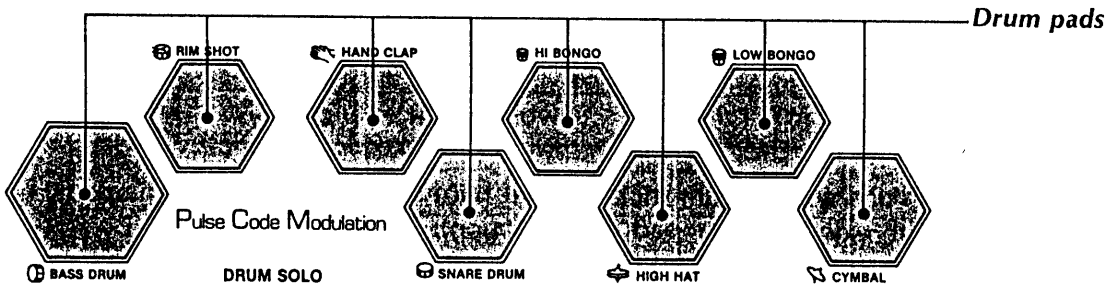




NOTE

- Memory capacity is approximately 508 notes (when only melody is input) or 677 chords (when only chords are input).
- Tempo is adjusted during recording and playback using the tempo control.
- Tone and rhythm can be selected during recording and playback.
- Input can be performed using auto accompaniment (Casio Chord/Fingered) for play. The Casio Chord switch is not operational, however, during playback.

8 Drum Solo



Striking any of the drum pads will produce the sound. Volume of the drum pad output can be adjusted using the rhythm volume control and the main volume control.

- **Manual fill-in**
  Striking any of the drum pads besides the bass drum pad causes rhythm accompaniment to stop for one measure, allowing manual play of a fill-in pattern.
  **Only bass drum is sounded for the currently selected auto-rhythm pattern/super drums pattern.*

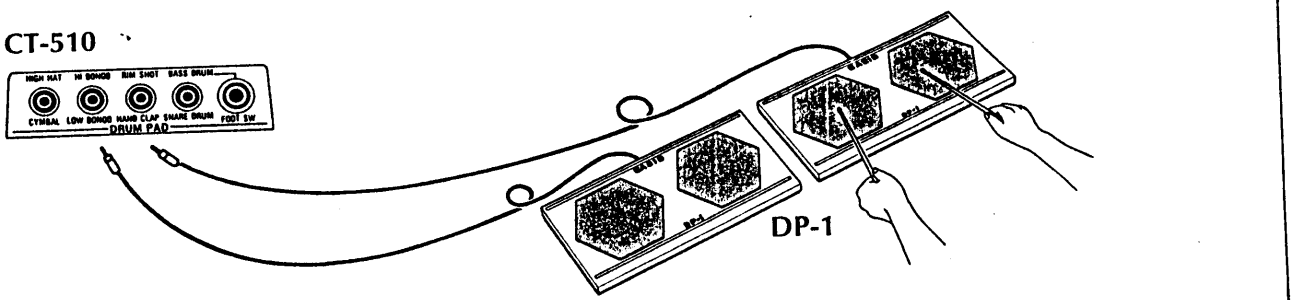
- **Drum solo**
  Striking the bass drum pad while an auto-rhythm is being used automatically stops the auto-rhythm and sounds the bass/chord only. Use drum pads for improvisational drum parts. Press the intro/fill-in button to return to auto-rhythm.

- **Minus one play**
  Instruments set to "MANUAL" using the super drum instrument selector do not sound during auto-accompaniment, allowing free performance of their parts.

- **Foot switch**
  Bass drum may be sounded by foot when the optional sustain pedal (SP-1) is connected.

CAUTION

Strongly striking a drum pad with a drum stick or other hard object may damage the pads. Drum sticks should only be used with external drum pad (DP-1, option).



9 Troubleshooting

*For any malfunction, always check battery condition first. (see page 9)

Trouble	Possible Cause	Remedy
No sound even if keys are pressed.	1. Main volume turned down. 2. Headphones connected.	1. Turn up main volume. 2. Disconnect headphones.
No rhythm.	Rhythm volume turned down.	Turn up rhythm volume.
No accompaniment.	Main and accompaniment volume turned down.	Turn up main and accompaniment volume.
Occasional interference.	Refrigerators, washing machines and similar electric appliances.	Use outlet as far away as possible from appliance thought to be the cause.
No sound when connected to external amplifier.	1. Main volume turned down. 2. Defective connection cord.	1. Turn up main volume. 2. Replace connection cord.

10 Care of Your Unit

1. **Avoid heat, humidity, and direct sunlight.**
   Do not overexpose the unit to direct sunlight, place it near a heater, or in any area subject to high temperature.

2. **Avoid severe impacts and do not drop.**
   Severe impacts can result in malfunction. When carrying or transporting the unit, protect the keyboard and buttons by packing with soft cloth.

3. **Keep the unit free of liquids, dust, particles, etc.**
   Do not allow foreign matter to enter between the keys. Be especially careful of metallic objects such as hairpins, sewing needles or coins. Also, do not allow the unit to get wet.

4. **Never attempt to modify any part of the unit.**
   Your keyboard is a precision musical instrument made up of sophisticated electronic parts. Any modification of, or tampering with internal components can cause trouble or malfunction.

5. **Do not use lacquer thinner or similar chemicals for cleaning.**
   Clean the keyboard with a soft cloth dampened with a mild detergent solution. Soak the cloth in the detergent solution and squeeze it until almost dry.

6. **Remove batteries before extended storage.**
   Batteries left in the unit for long periods can leak and cause damage to electronic circuitry.

7. **In case of malfunction...**
   Check whether buttons and connections are set correctly as indicated in the troubleshooting chart on page 21 of this manual. If the unit still does not work properly, contact the original retailer or a nearby dealer. Never attempt to repair the unit yourself. This can result in serious damage of the components.

11 Specifications

Model:	Casiotone CT-510
Number of keys:	49 keys
Polyphonic:	8-note
Preset tones:	12 sounds; piano, vibraphone, jazz organ, violin, trumpet, funky clavi., elec. piano, elec. guitar, pipe organ, human voice, flute, synth. sound
Auto-rhythm:	12 rhythms; rock 1, pops, disco, swing, samba, march, rock 2, reggae, 16 beat, slow rock, bossa nova, waltz
Rhythm source:	Pulse Code Modulation
Super drums:	Bass drum, snare drum/rim shot, hand clap/bongo, cymbal/high hat, bass/chord
Auto-accompaniment function:	Casio Chord ON/OFF, Fingered
Drum solo:	Built-in drum pads × 8 (Bass drum, snare drum, rim shot, hand clap, hi bongo, low bongo, cymbal, high hat)
Built-in speaker:	12 cm (4 3/4") dia. × 2 (output = 2W + 2W)
Output jack:	Output impedance = 5 KΩ Output voltage = 1.0 V (RMS) max.
Power source:	3-way AC/DC power source; • AC: 100, 117, 220 or 240 V (±10 V), 50/60 Hz, with optional AC adaptor AD-5. • DC: 6 D size manganese dry batteries. Battery life: Approximately 10 hours (SUM-1). • Car battery: Power taken via optional car adaptor CA-5.

11 Specifications

Auto power off function:	6 minutes after last operation
Power consumption:	9.0 W
Dimensions:	980 (W) × 278 (D) × 87 mm (H) 38 9/16″ (W) × 10 15/16″ (D) × 3 7/16″ (H)
Weight:	5.8 Kg (12.8 lbs) including batteries
Standard accessories:	6 D size manganese dry batteries (SUM-1), dust cover, music stand

**Design and specifications are subject to change without notice.*

GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THE UNIT IN THE U.S.A. (not applicable to other areas).

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

..... reorient the receiving antenna
..... relocate the computer with respect to the receiver
..... move the computer away from the receiver
..... plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.